

CLAIMS

What is claimed is:

1. A method for determining applicable configuration information for use in analysis of a computer aided design, comprising:
 - 5 generating a state machine using information contained in a plurality of configuration commands;
 - applying a design element name, associated with a design element, to the state machine; and
 - generating with the state machine a list including configuration information
 - 10 applicable to the design element.
2. The method of claim 1, wherein the state machine is compiled by determining, from a set of regular expressions associated with the configuration commands, a set of states and transitions between the states that are matched against characters of the design element name to determine zero or more regular expressions
- 15 that match the design element name, wherein any of the regular expressions have associated therewith one or more corresponding configuration commands applicable to the design element name.
3. The method of claim 1, wherein the design element name is associated with a net in the design.
- 20 4. The method of claim 3, wherein the state machine generates the list by evaluating regular expressions, associated with each net of interest in the design, to determine an accepting state for each of the regular expressions, wherein each accepting state has associated therewith one or more corresponding ones of the configuration commands applicable to net names in the design.
- 25 5. The method of claim 4, wherein each of the configuration commands includes a command type field indicating the characteristic to which the command is applicable, and a value field indicating the value to which the design element corresponding to the design element name is to be set.

6. The method of claim 5, wherein each of the configuration commands further includes a net name field comprising a regular expression indicating at least one specific net in the design to which a corresponding one of the configuration commands is applicable.

5 7. The method of claim 1, including the step of applying the configuration commands to at least one net in the design, wherein the design element name is associated with the net.

8. The method of claim 1, wherein the design element name is a net name contained in a netlist associated with the design.

10 9. A system for determining applicable configuration information for use in analysis of a computer aided design, comprising:
a file containing a plurality of configuration commands for setting values associated with nets in the design;
a netlist containing a plurality of net names, each of which is associated with
15 one of the nets;
a processor; and
a state machine, executed by the processor, that is compiled using information contained in a plurality of configuration commands, wherein, in response to input comprising one of the net names, the state machine
20 generates a list including configuration information applicable to one of the nets corresponding to the input.

10. The system of claim 9, wherein the state machine is compiled by determining, from a set of regular expressions associated with the configuration commands, a set of states and transitions between the states that are matched against
25 characters of a net name to determine zero or more regular expressions that match the net name, wherein any of the regular expressions thus determined have associated therewith one or more corresponding ones of the configuration commands applicable to the net name.

11. The system of claim 10, wherein each of the configuration commands includes a command type field indicating a characteristic to which the command is applicable, and a value field indicating the value to which the net corresponding to the net name is to be set.

5 12. The system of claim 11, wherein each of the configuration commands further includes a net name field indicating a specific net to which a corresponding one of the configuration commands is applicable.

13. A method for determining applicable configuration information for use in analysis of a computer aided design, comprising:

10 generating a state machine using information contained in a plurality of configuration commands, wherein, in response to input comprising a net name associated with a net in the design, the state machine generates a list including configuration information applicable to the net;

15 wherein the state machine is compiled by determining, from a set of regular expressions associated with the configuration commands, a set of states and transitions between the states that are matched against characters of the net name to determine zero or more regular expressions that match the net name, wherein any of the regular expressions thus

20 determined have associated therewith one or more corresponding configuration commands applicable to the net name;

 wherein each of the configuration commands includes a command type field indicating the type of entity to which the command is applicable, and a value field indicating the value to which the net corresponding to the

25 net name is to be set;

 applying a net name, associated with the design, to the state machine to generate the list; and

 applying the configuration commands in the list to at least one of the nets in the design.

14. The method of claim 13, wherein each of the configuration commands further includes a net name field indicating a specific net in the design to which a corresponding one of the configuration commands is applicable.

15. A system for determining applicable configuration information for use
5 in analysis of a computer aided design, comprising:

means for generating a state machine using information contained in a plurality of configuration commands, wherein, in response to input comprising a design element name associated with a net in the design, the state machine generates a list including the configuration
10 information applicable to the net; and
means for applying the design element name to the state machine to generate the list.

16. The system of claim 15, wherein each of the configuration commands includes a command type field indicating the type of entity to which the command is
15 applicable and a value field indicating the value to which the design element corresponding to the design element name is to be set, and wherein the state machine is compiled by determining, from a set of regular expressions associated with the configuration commands, a set of states and transitions between the states that are matched against characters of the design element name to determine zero or more
20 regular expressions that match the net name, wherein any of the regular expressions thus determined have associated therewith one or more corresponding configuration commands applicable to the design element name.

17. The system of claim 16, wherein each of the configuration commands further includes a net name field indicating a specific net to which a corresponding
25 one of the configuration commands is applicable.

18. A software product comprising instructions, stored on computer-readable media, wherein the instructions, when executed by a computer, perform steps for determining applicable configuration information for use in analysis of a computer aided design, comprising:

- instructions for generating a state machine using information contained in a plurality of configuration commands, wherein, in response to input comprising a net name associated with a net in the design, the state machine generates a list including the configuration information applicable to the net;
- 5 instructions for applying a net name, associated with the design, to the state machine to generate the list; and
- instructions for applying the configuration commands in the list to at least one net in the design.
- 10 19. The software product of claim 18, wherein the instructions for generating the state machine cause the state machine to be compiled by determining, from a set of regular expressions associated with the configuration commands, a set of states and transitions between the states that are matched against characters of the net name to determine zero or more regular expressions that match the net name, wherein
- 15 any regular expressions thus determined have associated therewith one or more corresponding configuration commands applicable to the net name.
20. The software product of claim 18, wherein the instructions for generating the state machine cause the configuration commands to be applied to at least one net in the design.